

NAGIBINA, T. I.

1A 9/4/76

USSR/Chemistry - Acetylene, Derivatives Jun 48
Chemistry - Ketones, Cyclic

"Acetylene Derivatives," I. N. Nazarov, T. D. Nagibina, Inst of Org Chem, Acad Sci USSR, 64 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 6

Series, 73d article. At 120 - 220°, 1,3-

dimethyl-cyclopentene-1-en-5 reacts with 1-vinyl-

Δ^1 -cyclohexene (I) forming two isomeric tri-

cyclic ketones containing a cyclopentanone

moieties with an angular methyl group. These

ketones, on hydrogenating on a Pt catalyst, absorb

one hydrogen molecule and become saturated triacyclo

ketones. latter are reduced to triacyclic al-

cohols by sodium in a solution of isopropyl

alcohol. I is transformed into dimer on heating.

This, on hydrogenation on a Pt catalyst, changes

to perhydro- α -phenyl-naphthalene. Submitted

7 Apr 1947.

YDB

9/4/76

COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										TWO AND 4TH CROSS									
MATERIALS INDEX										COMMON VARIABLE INDEX										E-2 INDEX									
8										27																			
Acetylene Derivatives. 55. Chemistry of Divinylketones. IX. Reaction of Furan and Silvan with <i>p,p'</i>-Dimethyldivinylketone. I. N. Nazarov and T. D. Nagibina. 56. Mechanism of Hydration of Divinylketone. Cyclization of Unsaturated α-Ketone Alcohols into Tetrahydro-γ-Pyrone. I. N. Nazarov and A. N. Elizarova. 57. Mechanism of Formation of Heterocyclic Acids. Cyclization of Unsaturated α-Ketone Alcohols in Tetrahydro-δ-Furanone. I. N. Nazarov. 58. Chemistry of Divinyl Ketone. Addition of Hydrogen Sulfide to <i>p,p'</i>-Dimethyldivinylketone. I. N. Nazarov and A. I. Kuznetsova. (In Russian.) <i>Izvestiya Akademii Nauk SSSR, Otdelenie Khimicheskikh Nauk</i> (Bulletin of the Academy of Sciences of the USSR, Section of Chemical Sciences), Nov. Dec. 1947, p. 641-655; Jan.-Feb. 1948, p. 107-120. 46 references.																													
ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION																													

NAGIVINA, T. D.

Nazarov, I. N., Nagivina, T. D., "Acetylene derivatives." (p. 1090)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1948, Volume 18, No. 6

BA

F III

Synthetic of anaphthene. XVII. Synthesis of polycyclic compounds related to the steroids. IV. Same condensation of 1:3-dimethylcyclopent-1-en-3-one and 1:3-dimethylcyclopent-1-en-3-one with 1- and 2-vinyltetrahydronaphthalene. I. N. Nasonov and T. D. Nagibina (J. gen. Chem. USSR, 1960, 29, 551-558 (U.S. transl., 561-568)).—Condensing 1:3-dimethylcyclopent-1-en-3-one with 1- and 2-vinyltetrahydronaphthalene gives an approx. 50% yield of tetracyclic ketones, which contain the cyclopentanone ring with an angular β -keto group which is typical of steroid compounds. Similarly, condensation with vinylcyclohexane and 1-vinylcyclohexanone gives the corresponding tetracyclic ketones which exist in their enolic forms.

trans-1-Ketodecahydronaphthalene, m.p. 31-33°, n_D^{20} 1.4640, in anhyd. Et_2O is added dropwise to a mixture of powdered KOH and anhyd. Et_2O previously saturated with C_6H_6 at -16°. After addition is complete, C_6H_6 is passed through the mixture for a further hr. thereby giving 1-ethyldecahydronaphthal-1-ol, $C_{20}H_{30}O$, b.p. 165-167°/6 mm., d_4^{20} 0.9081, n_D^{20} 1.5030, which is hydrogenated in MeOH containing Pd to 1-vinyldecahydronaphthal-1-ol, $C_{20}H_{28}O$, b.p. 118-119°/12 mm., d_4^{20} 0.9015, n_D^{20} 1.5040. This is dehydrated by powdered $KHSO_4$ under N_2 at 160-165°/34 mm. to 1-vinyl-3:4:4a:5:6:6:7:8:8a-octahydronaphthalene, $C_{20}H_{28}$ (II), b.p. 104-105°/13 mm., d_4^{20} 0.8983, n_D^{20} 1.5070, which condenses with $(CH_3CO)_2O$ to Δ^8 -dodecahydronaphthalene-1:2-dicarboxylic anhydride, $C_{20}H_{26}O_3$, m.p. 130°. Heating I and 1:3-dimethylcyclopent-1-en-3-one at 180-190° for 7 hr. gives much unaltered

material and a mixture, m.p. 72-88°, of 3-keto-1:2-dimethylcyclopentadecahydronaphthalene and 1'-keto-1:3'-dimethylcyclopentadecahydronaphthalene, one of which is obtained homogeneous, $C_{24}H_{34}O$, m.p. 132-133°, by repeated crystallization of the mixture from MeOH. The synthetic ketone does not afford a semicarbazone even when heated. The mother-liquor left after removal of the mixture, m.p. 72-88°, contains a substance, b.p. 170-185°/4 mm., n_D^{20} 1.5230, which crystallizes very slowly and, when crystallized repeatedly from MeOH, furnishes the other individual tetracyclic ketone, m.p. 70-72° (2:4-dimethylphenylhydrazones, $C_{24}H_{32}O_2N_2$, m.p. 208-210°). Condensing decahydro-2-naphthol with C_6H_6 in presence of KOH as described above gives 2-ethyldecahydro-2-naphthol (70%), b.p. 115-118°/8 mm., n_D^{20} 1.5080, partly hydrogenated (Pd in MeOH) to 2-vinyldecahydro-2-naphthol, $C_{20}H_{28}O$, b.p. 110-120°/7 mm., d_4^{20} 0.9065, n_D^{20} 1.5050, which is dehydrated by finely powdered $KHSO_4$ at 150-160° under N_2 to a mixture (III) of 2-vinyl- Δ^1 - and Δ^2 -octahydronaphthalene, b.p. 132-134°/50 mm., d_4^{20} 0.9274, n_D^{20} 1.5180, which condenses with $(CH_3CO)_2O$ to a product, $C_{24}H_{34}O_3$, m.p. 115-117° (decomp.), most probably a mixture of Δ^8 -dodecahydronaphthalene-1:2-dicarboxylic and Δ^1 -dodecahydronaphthalene-5:6-dicarboxylic anhydride. Heating II with 1:3-dimethylcyclopent-1-en-3-one

over

CA

10

The derivatives of acetylene CVII Synthesis of polycyclic compounds related to the steroids. 4 The diene condensation of 1,3-dimethyl-1-cyclopenten-5-one and 1,3-dimethyl-1-cyclopentene-4,5-dione with 1- and 2-vinyloctahydronaphthalenes I. N. Nazarov and T. D. Nagibina *J. Gen. Chem. U.S.S.R.* 20, 561-8 (1950) Engl. translation - See C.A. 44, 8912a R. M. S.

HAZAROV, I.N.; MAGIBINA, T.D.

Acetylene derivatives. Part 154. Polycyclic compounds related to steroids. No. 26. Structure of tricyclic ketones obtained in the diene condensation of 1-vinyl- Δ^1 -cyclohexene with 1,3-dimethyl- Δ^1 -cyclopentene-5-one. Zhur.ob.khim. 23 no.5:801-811 My '53. (MLRA 6:5)

1. Institut organicheskoy khimii Akademii Nauk SSSR. (Ketones)

NAGIBINA, T. D.

~~Acetylene derivatives. CLIV. Synthesis of polycyclic compounds related to steroids. 26. Structure of tricyclic ketones obtained in the diene condensation of 1-vinylcyclohexene with 1,3-dimethyl-1-cyclopenten-5-one. I. N. Nararov and T. D. Nagibina. J. Gen. Chem. U.S.S.R. 26: 839-48 (1953) (Rus; translation). See C.A. 48, 8950c.~~
H. L. H.

S/138/62/000/005/001/010
A051/A126

AUTHORS: Nazarov, I.N. (deceased); Nagibina, T.D.; Yasenkova, L.S.; Alik-berova, G.I.; Yas'ko, L.V.

TITLE: Copolymers based on butadiene, isoprene and dimethylvinylethynyl carbinol

PERIODICAL: Kauchuk i rezina, no. 5, 1962, 1 - 4

TEXT: The article deals with the reaction of copolymerization in an emulsion of butadiene and isoprene with dimethylvinylethynyl carbinol (DMVEC), in the presence of various initiators. A comparative evaluation of the vulcanizates of these rubber bases is made. Monomers used in the reaction were: rectified butadiene, DMVEC (boiling point 58 - 59°C/13 mm, n_D^{21} 1.4786, d_4^{25} 0.8925), isoprene (boiling point 34°C, n_D^{21} 1.4203). The various initiators used were: potassium persulfate, diazoaminobenzene and glucose, ~~diazoaminobenzene~~ with hydroquinone. The physico-chemical properties are studied of the butadiene and DMVEC copolymers [ДК-30 (DK-30) and ДК-10 (DK-10)], and of the isoprene and DMVEC copolymers [ИК-30 (IK-30) and ИК-10 (IK-10)]. It was found in experiments that car-

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Copolymers based on butadiene, isoprene and

S/138/62/000/005/001/010
A051/A126

bon black vulcanizates of the butadiene and IMVEC copolymers have a high tensile strength, a sufficiently high thermal resistance, satisfactory wear and crack growth resistance in repeated bends. They are superior to vulcanizates of industrial butadiene-styrene and butadiene-nitrile rubbers [CKC-30 (SKS-30) and CKH-26 (SKN-26)]. The DK-30 copolymers, produced in the presence of diazoaminobenzene and glucose, have the highest mechanical strength. The thermomechanical indices of the former are higher than those of the SKN-26 copolymers. The physico-mechanical properties of the IK-30 copolymer vulcanizates (excluding crack growth) are on one level with rubbers based on industrial SKS-30 rubber, and are superior to the latter in their crack growth resistance. The IK-10 copolymer vulcanizates are inferior to rubbers based on the industrial SKS-30 rubber as to physico-mechanical properties, excepting frost resistance.

ASSOCIATION: Institut organicheskoy khimii AN SSSR (Institute of Organic Chemistry at the AS USSR)

Card 2/2

L 32975-65 EWT(m)/EPT(c)/EPR/EMP(j) Pc-4/Pr-4/Ps-4 WW/JAJ/RM

ACCESSION NR: AP5007436

S/0286/65/000/004/0062/0063

AUTHOR: Nagibina, T. D.; Yassenkova, L. S.; Alekberova, G. I.; Petrov, A. D.;
Chernyshev, Ye. A.; Krasnova, T. L.

TITLE: A method for producing synthetic rubber. Class 39, No. 168446

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 62-63

TOPIC TAGS: synthetic rubber, emulsion polymerization

ABSTRACT: This Author's Certificate introduces a method for producing synthetic rubber by water emulsion copolymerization of divinyl with an unsaturated compound in the presence of an emulsifier and an initiator. The properties of the final product are improved by using n-trimethylsilicostyrene as the unsaturated compound.

ASSOCIATION: none

SUBMITTED: 26Sep62

ENCL: 00

SUB CODE: MT, OC

NO REF SOV: 000

OTHER: 000

Card 1/1

40070

S/138/62/000/008/001/007
A051/A126

15.9201

AUTHORS: Nikitin, V. I., Glazunova, Ye. M., Nagibina, T. D., Yassenkova, L. S.,
Alikberova, G. I., Origina, I. N.

TITLE: Copolymers based on butadiene and glycols of the isopropenylacetylene
row

PERIODICAL: Kauchuk i rezina, no. 8, 1962, 1 - 3

TEXT: The properties of copolymers containing a large number of hydroxyl groups were studied by investigating a copolymerization reaction between butadiene and glycols of the isopropenylacetylene row. The glycols used and produced by dehydration of the corresponding glycerines or by condensation of oxyketones with isopropenylacetylene, in the presence of potassium hydroxide, were: 2,3,6-trimethylheptene-6-in-4-diol-2,3 [glycol Г (G)], and 2-methyl-5(1-oxycyclopentyl)-hexene-1-in-3-ol-5 [glycol ИГ (TsG)]. Experimental data showed the copolymer of butadiene and glycol G [ДГ-10 (DG-10)], to be non-soluble in ordinary organic solvents, and the copolymer of butadiene and glycol TsG [ДИГ-10 (DTsG-10)], to be soluble in ether and benzene. The molecular weight of DTsG-10 (determined by

Card 1/2

NAGIBINA, T.D.; YASENKOVA, L.S.; ALIKBEROVA, G.I.; YAS'KO, L.V.

Copolymerization of butadiene and isoprene with dimethylvinylethynyl-
carbinol at 5°C. Kauch.i rez. 21 no.7:6-8 J1 '62. (MIRA 15:7)

1. Institut organicheskoy khimii AN SSSR.
(Butadiene) (Isoprene) (Alcohols)

L 7709-66 EMT(m)/EPF(c)/EWP(j)/T WW/RM
 ACC NR: AP5028897 SOURCE CODE: UR/0138/65/000/011/0002/0003

AUTHOR: Nagibina, T. D.; Yaskova, L. S.; Alikberova, G. I.; Korablev, Yu. G.;
 Kuzin, V. S.; Kuznetsova, A. I.; Zharova, A. S.; Vashumina, N. D. 49

ORG: Institute of Organic Chemistry im. Zelinskiy, AN SSSR (Institut organicheskoy
 khimii AN SSSR); Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov 44
 (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Phenol-containing rubber SKDF-10 15

SOURCE: Kauchuk i rezina, no. 11, 1965, 2-3

TOPIC TAGS: synthetic rubber, phenol containing rubber, copolymer 15

ABSTRACT: Phenol-containing rubbers have been prepared by emulsion copolymerization
 at 60C of butadiene and dimethyl(vinylethynyl)(4-hydroxyphenyl)methane(I) in the
 presence of diazoaminobenzene and hydroquinone. The best chemical, physical and
 mechanical properties were exhibited by copolymers containing 10% of I (SKDF-10 rubber).
 IR absorption spectra indicated that copolymerization occurs via the double band of
 I. SKDF-10 rubbers can be vulcanized by such agents as sulfur, phenol-formaldehyde
 resins, or hexamethylene tetramine. The formulation of the mixtures, the properties
 of the rubbers, vulcanization methods, and the vulcanizate properties are described
 in the source. The properties of SKDF-10 vulcanizates are similar to those of buta-
 diene-styrene SKS-30 vulcanizates, but their fatigue strength in compression is 15

Card 1/2 UDC: 678.762.2-134.647:546/547.07.00 2921 2117

L 7709-66

ACC NR: AP5028897

twice as high as that of SKS-30 vulcanizates. SKDF-10 latex impregnation compositions exhibit enhanced adhesion. [80]

SUB CODE: MT/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 4142

Card

2/2

S/043/60/000/13/15/016
C111/C222

AUTHOR: Nagirner, D.I.

TITLE: Point Source of Light in the Semiinfinite Medium

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1960, No. 13, pp. 147 - 151

TEXT: According to the method of Eddington the author determines the mean intensity of the radiation caused by a lumped source of light in a semi-infinite medium. The results of a numerical calculation are given for the case where a pure scattering takes place and the source is at the boundary of the medium. It is pointed out that the intensity in the case of the semi-infinite medium is essentially smaller than in the case of the infinite medium.

There is 1 table.

Card 1/1

✓B

NAGIRNER, D.I.

Light polarization in stellar atmospheres. Uch.zap.LGU
no.307:79-87 '62. (MIRA 15:9)
(Stars—Atmospheres) (Polarization (Light))

ACCESSION NR: AP4018869

S/0043/64/000/001/0142/0149

AUTHOR: Nagirner, D. I.

TITLE: The multiple scattering of light in a spectral line

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1964, 142-149

TOPIC TAGS: spectroscopy, spectral line, spectral line scattering, light scattering, frequency redistribution, resolvent, Lorentz profile, Doppler profile

ABSTRACT: The multiple scattering of light in a spectral line is of interest to astronomers. It is usually assumed that such scattering takes place with a complete redistribution by frequency. This signifies that the probability of radiation in line of a quantum of a definite frequency does not depend on the frequency of the quantum when it was absorbed. In such a case the transfer process can be described by a linear, integral equation whose kernel depends on the absolute value of the difference of the arguments. For example, if the radiation is propagated in an infinite plane-parallel medium, this equation has the form:

$$B(\tau) = g(\tau) + \frac{1}{2} \int_{-1}^{+1} K(|\tau - \tau'|) B(\tau') d\tau'. \quad (1)$$

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ACCESSION NR: AP4018869

where τ is the optical intensity at the center of the line, $B(\tau)$ is the source function, λ is the probability the quantum will survive a single scattering, $4\pi g(\tau)$ is the radiation source power, and it is assumed that the frequency distribution of the radiation of the quanta is proportional to the coefficient of absorption in the line. The kernel $K(\tau)$ has different forms in different situations. For $K(\tau)$ of the form:

$$K(\tau) = \int_0^\tau A(y) e^{-y} dy, \quad (2)$$

and for $g(\tau) = (\lambda/2)K(\tau)$, (1) takes the form:

$$B(\tau) = g(\tau) + \int_0^\tau \Gamma(\tau, \tau') g(\tau') d\tau', \quad (3)$$

where

$$\Gamma(\tau, \tau') = \Phi(|\tau - \tau'|) + \int_0^{|\tau - \tau'|} \Phi(t) \Phi(t + |\tau - \tau'|) dt. \quad (4)$$

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ACCESSION NR: AP4018869

and the functions $\epsilon_{00}(\omega)$ and $\nu(\omega)$ are called resolvents. In a previous paper the author found explicit expressions for the resolvents when $K(\omega)$ was of form (2). In the present article, these general formulas are applied to the solution of the problem of the scattering of light in a spectral line taking the redistribution by frequency into account. It is assumed that in a continuous spectrum there is no absorption. Both one- and three-dimensional media are considered. In both types of media the two cases when the absorption coefficient has a Lorentz and a Doppler profile are studied and asymptotic expressions for the resolvents are obtained. "In conclusion, the author thanks V. V. Ivanov for his guidance and help." Orig. art. has: 52 equations.

ASSOCIATION: None

SUBMITTED: 08Jul63

DATE ACQ: 23Mar64

ENCL:00

SUB CODE: PH

NO REF SOV: 010

OTHER: 002

Card

3/3

KOLESOV, A.K.; NAGIRNER, D.I.

Point source in a semi-infinite medium bounded by a reflecting
surface. Vest. LGU 19 no.13:125-132 '64 (MIRA 17:8)

ACCESSION NR: AP4043955

S/0033/64/041/004/0669/0675

AUTHOR: Nagirner, D. I.

TITLE: Solution of integral equations of the theory of light scattering

SOURCE: Astronomicheskii zhurnal, v. 41, no. 4, 1964, 669-675

TOPIC TAGS: light scattering, stellar atmosphere, nebula, planetary atmosphere, astronomy, multiple light scattering, coherent light scattering, incoherent light scattering

ABSTRACT: The study of stellar atmospheres, nebulae and planetary atmospheres involves the problem of multiple scattering of light in a medium consisting of plane-parallel layers. In the case of isotropic scattering this problem can be reduced to the solution of a linear integral equation (with finite and semi-infinite integration intervals) with a kernel dependent on the difference modulus of the arguments. If the medium is considered infinite, this equation has the form:

$$B(\tau) = g(\tau) + \frac{\lambda}{2} \int_{-\infty}^{\infty} K(|\tau - \tau'|) B(\tau') d\tau', \quad (1)$$

where τ is optical depth, read from a certain level perpendicular to the layers, $B(\tau)$ is the source function, $4\pi g(\tau)$ is the intensity of the sources at the depth τ , and λ is

Card 1/3

L 22441-66 EWT(m)/EWP(j)/T IJP(c) RM
ACC NR: AP6006362 (A) SOURCE CODE: UR/0413/66/000/002/0095/0095
AUTHOR: Nikitin, V. I.; Glazunova, Ye. M.; Narnitskaya, M. A.;
Nagibina, T. D.; Yassenkova, L. S.
ORG: none
TITLE: Preparation of synthetic rubber. Class 39, No. 178107
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2,
1966, 95
TOPIC TAGS: synthetic rubber, copolymerization, butadiene
ABSTRACT: This Author Certificate concerns a method for preparing
synthetic rubber by water-emulsion copolymerization of butadiene⁷ with
vinylethynyl compounds at reduced temperatures in the presence of
peroxide initiators. In order to increase the number of types of
synthetic rubbers, 3,4,7-trimethylocten-7-yne-5-diol is proposed for
use as a vinylethynyl compound. [LD]
SUB CODE: 11/ SUBM DATE: 15Jun64
Card 1/1 UDC: 678.762.2-136.93

L 41367-66 ENT(m)/ENP()/T IUP() WW/D/ERM
ACC NR: AP6022886 (A) SOURCE CODE: UR/0138/66/000/004/0002/0003

AUTHOR: Nagibina, T. D.; Yassenkova, L. S.; Alikberova, S. I.; Petrov, A. S. (Deceased); Chernyshev, Ye. A.; Krasnova, T. L.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy (Institut organicheskoy khimii)

TITLE: A synthetic butadiene-silicostyrene rubber

SOURCE: Kauchuk i rezina, no. 4, 1966, 2-3

TOPIC TAGS: synthetic rubber, butadiene styrene rubber, organosilicon compound, COPOLYMERIZATION, EMULSION POLYMERIZATION

ABSTRACT: In order to obtain new types of rubbers, the emulsion copolymerization of n-trimethylsilicostyrene $(CH_3)_3Si-C_6H_4-CH=CH_2$ with butadiene was studied at 60°C, with potassium persulfate or azoisobutyrodinitrile as the polymerization initiator, and also at 5°C in the presence of the redox system tert-butylisopropylbenzene - hydroquinone. n-Trimethylsilicostyrene was obtained from trimethylchlorosilane and n-chlorostyrene. The latexes obtained were stabilized with a 2% alcohol solution of Neozone D. The copolymers obtained with azoisobutyrodinitrile (DKS-30) at 60°C are poorly soluble in benzene (up to 20%); those obtained at 5°C (DKS-30Kh) dissolved in benzene almost completely, and their M_n was found to be 270,000. The DKS-30 polymers contain up to 6% Si, and DKS-30Kh, up to 5% Si; this corresponds to a copolymer composition in which 5 and 8 units of butadiene respectively are present for one unit of

Card 1/2

UDC: (678.762.2-134.622+546.28).004.12

L 41367-66

ACC NR: AP6022886

4/
n-trimethylsilicostyrene. Rubber mixtures based on SKS-30 and DKS-30Kh copolymers were prepared and vulcanized at 142°C. Vulcanizates of DKS-30 copolymer have a greater wear resistance, fatigue strength, resistance to benzene and heat resistance than vulcanizates prepared from SKS-30. Vulcanizates of the low-temperature copolymers DKS-30Kh surpass vulcanizates from SKS-30A in fatigue strength and heat resistance. The remaining properties of both copolymers are the same as those of vulcanizates from SKS-30 and SKS-30A. Orig. art. has: 1 table.

SUB CODE: 11/ SUBM DATE: 05Oct64/ ORIG REF: 001/ OTH REF: 001

Card

2/2

ACC NR: AP6036351

(A)

SOURCE CODE: UR/0138/66/000/011/0002/0002

AUTHOR: Nagibina, T. D.; Yassenkova, L. S.; Alikberova, G. I.; Petrov, A. D.;
Chornyshov, Ye. A.; Krasnova, T. L.

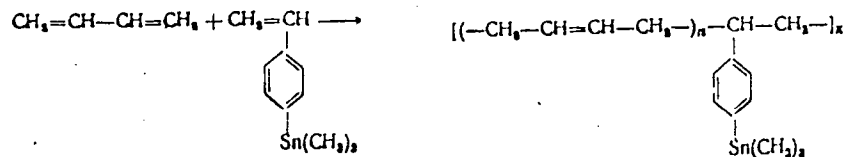
ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, AN SSSR (Institut organicheskoy khimii AN SSSR)

TITLE: Tin-containing synthetic rubber

SOURCE: Kauchuk i rezina, no. 11, 1966, 2

TOPIC TAGS: organotin compound, synthetic rubber, copolymerization

ABSTRACT: A new type of tin-containing synthetic rubber (SKDOS-30) has been produced by copolymerizing butadiene and p-trimethyltinstyrene at 60°C:



The yield of the copolymer was 60-70%. At the end of the reaction, the latex was stabilized with a 2% alcohol solution of neozone D. The latex was coagulated with a

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UDC: (678.762.2+678.86).547.07.004.12

ACC NR: AP6036351

solution of sodium chloride and acetic acid. The range of highly elastic deformation of the DOS-30 copolymer extends from -40 to +220 °C; the glass transition temperature is -40 °C; the copolymer begins to cross-link at 220 °C. Rubber mixtures based on SIDOS-30 copolymer were prepared in accordance with the standard recipe for SKS-30 rubber. The vulcanization of the mixtures lasted 20 min at 142 ± 1 °C. In physico-mechanical properties, SKDOS-30 vulcanizates are equivalent to rubbers based on SKS-30, with the exception of the fatigue strength, which is several times greater than that of SKS-30 rubbers.

SUB CODE: 11/ SUBM DATE: 09Nov64/ ORIG REF: 001/ OTH REF: 002

Card 2/2

NAGIBINA, T. Ye.

Conference of state sanitation inspectors on the sanitation of water-
reservoirs and water supply and sewer systems. Gig. 1 san. no. 7:57-58
Л 1 '53. (MLBA 6:7)
(Water supply) (Sewerage)

NAGIBINA, T.Ye.; SOLOV'YEVA, T.A.

Organization of sanitary control of water supplies by state sanitary agencies. Gig. i san. 23 no.12:39-43 D.'58. (MIRA 12:1)

1. Iz Glavnoy gosudarstvennoy sanitarnoy inspeksii SSSR.
(WATER SUPPLY
sanit. control of reservoirs in Russia (Rus))

NAGIMINA, T. YE., LAVROV, A. A.

"The practice of sanitary protection of reservoirs in the USSR."
report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

NAGIBINA, T.Ye.

Methodological instructions on the sanitary protection of reservoirs
from contamination by petroleum and phenols. Gig. i san. 24 no.2:
55-57 F '59. (MIRA 12:3)

1. Iz Glavnoy gosudarstvennoy sanitarnoy inspeksii Ministerstva
zdravookhraneniya SSSR.

(WATER POLLUTION, prev. & control

reservoir pollution by petroleum & phenols, sanitary
prev. (Rus))

(PETROLEUM PRODUCTS

pollution of reservoirs, sanitary prev. (Rus))

(PHENOLS

same)

NAGIBINA, T.Ye.

Measures for improving the hygienic condition of natural waters.
Gig. i san. 25 no.4:75-78 Ap '60. (MIRA 13:8)

1. Glavnyy inspektor po okhrane vodoyemov Gosudarstvennoy sanitarnoy
inspktsii SSSR.

(WATER SUPPLY—HYGIENIC ASPECTS)

NAGIBINA, T. Ye.

Hygienic standards for toxic substances in the environment,
particularly in the sanitary protection of reservoirs. Gig.
i san. 25 no. 7:50-55 JI '60. (MIRA 14:5)

1. Glavnyy inspektor po sanitarnoy okhrane vodoyemov Glavnoy
gosudarstvennoy sanitarnoy inspeksii SSSR.
(WATER—POLLUTION)

NAGIBINA, T.Ye. (Moskva)

Problem of water protection in Europe. Gig. i san. 26 no.10:66-69
0 '61.

(MIRA 15:5)

(EUROPE--WATER--~~POLLUTION~~)

NAGIBINA, T.Ye.

New phase in water pollution control. Gig. i san. 26 no.11:66-68
N '61. (MLA 14:11)

1. Glavnyy inspektor po sanitarnoy okhrane vodoyemov Glavnoy gosudarstvennoy sanitarnoy inspeksii SSSR.
(WATER--POLLUTION)

ASHKINUZI, Z.K.; YEGOROV, A.S.; MAMUNYA, A.U.; MAGICHEVA, A.I.;
SYCH, P.K.; TYUZHEV, M.F.

Continuous cooking at the Trilesskiy Alcohol Plant.
Spirit.prom. 26 no.4:15-19 '60. (MIRA 13:8)
(Kiev—Alcohol)

NAGIEC, Maria

Growth and tentative estimation of mortality of the pike perch
(*Lucioperca lucioperca*(L)) in Vistula River. Roczniki
zootechn 84 no.2:329-345 '64.

1. Department of Fish Biology of the School of Agriculture,
Olsztyn, and Laboratory of River Farming of the Institute of
Inland Water Fisheries, Olsztyn.

NAGIELLO, ZYGMUNT

~~SECRET~~

PHASE I BOOK EXPLOITATION

FGL/5981

Symposium on Electroacoustic Transducers. Krynica, 1958

Proceedings of the Symposium on Electroacoustic Transducers [held in] Krynica, 17-26 September, 1958. Warsaw, Państwowe Wydawnictwo Naukowe, 1961. 442 p. Errata slip inserted. 630 copies printed.

Sponsoring Agency: Polish Academy of Sciences. Institute of Basic Technical Problems.

Ed. in Chief: Janusz Kacprowski, Doctor of Sciences; Editing Committee: Ignacy Malecki, Professor, Doctor of Sciences; Wincenty Pajewski, Doctor; and Jerzy Wehr, Master of Sciences; Secretary: Juliusz Mierzejewski.

PURPOSE: This book is intended for physicists and acoustical engineers.

COVERAGE: The book is a collection of detailed research papers constituting the proceedings of a conference held in Krynica from 17 to 26 September 1958 under the auspices of the Institute of Technical Problems, Polish Academy of Sciences.

Card 1/8

Symposium on Electroacoustic Transducers

PCU/9981

The following basic problems are treated: 1) theoretical research on energy transformation processes; 2) experimental development of new types of transducers; 3) physical acoustical measurements; 4) technology of piezoelectric and magnetostrictive materials; 5) construction of transducers for technical needs; and 6) design of acoustical transducer systems. No personalities are mentioned. References (if any) follow the individual articles.

TABLE OF CONTENTS:

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Problems of Research Work on Electroacoustic Transducers. Ignacy Malecki, President of the Conference	5
Ch. 1. General Problems and Theory of Electroacoustic Transducers	
1. Classification of electromechanical transformation methods in the light of the tasks faced with [sic] the design and construction of electroacoustic equipment. V. S. Grigor'yev	7

Card 2/8

Symposium on Electroacoustic Transducers

POL/5981

- | | |
|--|-----|
| 36. Underwater piezoelectric electroacoustic transducer with a flat frequency response from 100 Hz to 100 kHz. <u>Zygmunt Nagiello</u> | |
| 37. Splitting of ultrasonic pulse in magnetostrictive transducers fed by overvolting systems. Jerzy K. Skrzela | 353 |
| 38. Calibration exciter for checking accelerometers. Per V. Bruel | 361 |
| 39. Calibrator for phonograph pickups. Zygmunt Komornicki | 375 |
| 40. Non-reflecting piezoelectric probe and equipment for measuring ultrasonic field intensities in fluids. J. Karpinski and J. Wehr | 379 |
| 41. Investigation of the bases of ultrasonic generation in a flow-type equipment. Boleslaw Lesniak | 385 |
| 42. Ultrasonic hydrogenerators. C. Wachtl, A. Sigalin, and E. Karczmarczyk | 393 |
| 43. Particular case of mechanoelectric transducer applied to steel construction testing. Stefan Ziomba and Jerzy Kasinski | 401 |
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Card 7/8

NAGIELLO, Zygmunt, mgr., inż.

Harmful influence of mechanical vibrations with acoustic frequencies on the human organism and means for preventing it on ships. Bud okret 7 no.3:87-92 Mr '62

1. Zaklad Elektrotechniki Morskiej Politechniki Gdanskiej

L 18887-63

EWT(1)/BDS

AFFTC

GW

P/0034/63/000/004/0172/0175

54
53

ACCESSION NR: AP3001766

AUTHOR: Nagiello, Zygmunt (Graduate Engineer); Chamski, Roman (Graduate Engineer)

TITLE: Underwater acoustic probe with flat efficiency characteristic in wide frequency range

SOURCE: Pomiar, automatyka, kontrola, no. 4, 1963, 172-175

TOPIC TAGS: sound detection, underwater acoustic probe, acoustic probe, seignette crystal

ABSTRACT: The authors discuss the selection of the type and technical characteristics of an underwater acoustic probe having a flat efficiency characteristic in a frequency range of 50 cycles to 100 kilocycles. The microphone for work in a liquid medium must be stable and insensitive to temperature changes. The microphone they used is of a piezoelectric type, made of Seignette salt crystal. The construction of the mechanical-acoustical arrangement is shown in Fig. 1 of Enclosure 1. Its representation in terms of electrical equivalents is given on Fig. 2 of Enclosure 2. The electric circuit of the probe is described in detail, it is very simple. The block diagram of the microphone-amplifier-cable arrangement is shown in Fig. 3 of Enclosure 3, and the general view is represented in Card 1/6

L 18887-63

ACCESSION NR: AP3001766

Fig. 4 of Enclosure 4. At frequencies of about 1 kcycles, the microphone efficiency S sub k is 20 microvolts per microbar. Over the entire frequency range of 50 cy to 100 kcy, the deviation from this efficiency is plus or minus 1.5 decibel. The efficiency characteristic is flat. The noise level at the input to the electron circuit is about 12 microvolts. The measurement range is 0.5 to 10,000 microbars. The temperature range is 10 to 30C. Two types of batteries may be used: of 67.5 V and of 1.5 V. The probe can be in use for about 20 hrs without battery change. The microphone diameter is 12 mm; the total length of the circuit is 400 mm. The probe can be used in many underwater and even gaseous-media applications. Orig. art. has: 7 figures and 7 equations.

ASSOCIATION: Zaklad Elektrotechniki Morskey Politekhnik Gdan'skey (Marine Electrical Engineering Department, Gdansk Polytechnic Institute)

SUBMITTED: 00

DATE ACQ: 28May63

ENCL: 04

SUB CODE: RA, SD

NO REF SOV: 000

OTHER: 000

Card

2/8

NAGIMOV, I.B. (Kazan'); KHAYKIN, ON N.M. (Kazan')

Conference on the Diagnosis and Treatment of Precancerous Diseases,
held in Kazan on June 7-9, 1961. Kaz. med. zhur. no.4:119-120 '61.
(MIRA 15:2)

(CANCER__CONGRESSES)

NAGIN, V.

Rapid testing of cement. Biul.stroi.tekh. 10 no.11:15 Je '53.

(MLRA 6:8)

(Cement--Testing)

NAGIN, V.

U S S R .

Colored plaster from local material. V. Nagin. *Byull. Stroitel. Tekh.* 1953, No. 14, 20. *Referat. Tekh.* 1954, No. 20683. — Plaster is colored by adding various materials, such as Argayash deposit sand which is red, yellow, or white, granite screenings which are gray or bluish, ground kerpen-tine, ground slag, ground brick, or the like. Luster is imparted by adding ground glass. M. Hoseb

NAGINA, A.Ya.; PLAKHOV, S.M.

Centrifugal casting of capron parts. Biul.tekh.-ekon.inform.Gos.
nauch.-issl.inst.nauch.i tekh.inform. no.12:29-31 '63.
(MIRA 17:3)

NAGINSKAYA, I.

Corrugated slag-cement sheets for granary roofs. Muk.-elev.prom.
21 no.12:27 D '55. (MIRA 9:4)

1.Nikelayevskaya shkela desyatnikov-streiteley.
(Roofing) (Slag cement)

5(2)

PHASE I BOOK EXPLOITATION

SOV/1974

Naginskaya, Izabella Yakovlevna

Zhidkoye steklo (Water Glass) [Odessa] Odesskoye obl. izd-vo,
1958. 36 p. 2,000 copies printed.

Ed.: M. Rubin; Tech. Ed.: T. Molchanova.

PURPOSE: This brochure is intended for builders, architects,
and persons engaged in the building-materials industry.

COVERAGE: The brochure acquaints readers with the history of
water glass and its physicochemical properties and presents
the most effective methods of its industrial preparation.
There are no references. No personalities are mentioned.

Card 1/ 2

Water Glass

SOV/1974

TABLE OF CONTENTS:

Water Glass and Its Properties	5
Physical Properties of Water Glass	19
Chemical Properties of Water Glass	20
Storage of Water Glass	21
Application of Water Glass in Industry and Building	21
Use of Water Glass in Soil Conditioning	29

AVAILABLE: Library of Congress (TP 869.N3)

TM/rj
7-27-59

Card 2/2

LEVIN, E.D.; PRAVDIVYY, I.G.; NAGINSKAYA, L.V.

Using the head fractions of crude benzene for producing compressed materials. Koks i khim. no.8:44-46 '61. (MIRA 15:1)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Benzene) (Building materials)

NAGINSKIY, I.N., inzh.

Organization of the utilization of the automatic and mechanized means of technological control in the machine industry. Trakt. i sel'khoz mash. 33 no.12:35-37 D '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut tekhnologii traktornogo i sel'skokhozyaystvennogo maschinostroyeniya.

NAGINSKIY, N. A.

PA5/49T57

USSR/Hydrology
Potamology

May 48

"The Formation of Benches on River Banks," N. A.
Naginskiy, 2 pp

"Priroda" No 5

Naginskiy has made observations on the rivers of the central part of Western Siberia (the Chizhanka, Vasyugan, Yugan, etc.). Describes formation and obliteration of benches. Includes photograph of Chizhanka River, and hydrological graph for Ebet River.

~~5/49T57~~ 5/49T57

Chair Geomorphology, Tomsk State U.

NAGINSKIY, N. A.

USSR/Geology
Topography
Glaciation

Dec 48

"Pressure Formations and Phases of the Development of the Ural Glacial Deposit in the Western Siberian Plain," N. A. Naginskiy, 2 pp

"Priroda" No 12

Deposits are in the form of large accumulations of debris-forming impressive ridges in western Siberian regions. Discusses formation of ridges and probable pressures exerted by the ancient icecap in their formation. Notes vicinities

where such topographical phenomena occur most frequently.

PA 25/49T33

25/49T33

NAGINSKIY, N.A.

28943 Kary Dagestana, Priroda, 1949, No. 9 S. 50-54

SO : Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

LAZAROV, I. A.

25572

Chetvertichnaya Istoriya SSSR i ikh Ploshchadi i Resursy. Vol. 12, 1949, s. 99 - 100.

SC: 120413 10. 31

NAGINSKIY, N. A.

" 19th Birthday of Acad. Vladimir Afanas'yevich Obruchev" (Geography, Personalia)
Vopr. geografii Sibiri, No 3, 1953, pp 5-12

W-31146, 1 Feb 55

NAGINSKIY, N.A. [author]; OBRUCHEV, V.A. [reviewer].

"Glaciation of the Western Siberian Lowland" and other works. Biul.Kom.
chetv.per. no.17:101-102 '53. (MLRA 6:11)
(Siberia, Western--Glacial epoch) (Glacial epoch--Siberia, Western)

NAGINSKIY, N.A.

Academician V.A.Obruchev's views on the history of glaciation at the western Siberian lowland in the light of general dynamic problems concerning glacier deposits. Biul.Kom.chetv.per. no.19:23-27 '53.

(MLBA 7:11)

(Obruchev, Vladimir Afanas'evich, 1863-) (Siberia, Western--
Glacial Epoch) (Glacial Epoch--Siberia, Western)

NAGINSKIY, N. A.

USSR/Geophysics - Glacier Loess

11 Jul. 53

"Regions of Weathering of Quaternary Glacial Covers
in the Western Siberian Lowland," N. A. Naginskiy,
Tomsk State Univ im V. V. Kuybyshev

DAN SSSR, Vol 91, No 2, pp 373-378

Describes indisputable indications of a former strong
active wind, which are coarse detritus showing on
their surface notable traces of aeolian action
(polishing, pitting, brazing). Presented by Acad
V. A. Obruchev 15 May 53.

276T58

NAUMENSKIY, N. A.

1 JUL 59

USSR/Geophysics - Glaciers

"The Mechanism Governing the Growth of Quaternary Glacial Cover in the West Siberian Lowlands," N. A. Naumenskiy, Soviet State # 1 in V. V. Knyazev

Dokl. SSSR, Vol. 21, No. 3, pp. 1-4

Explains the mechanism of growth of Quaternary continental glacial cover by studying the vast area of glaciation in the West Siberian Lowlands and develops a new description of Quaternary glaciation process by Soviet investigators. Presented by A. A. Naumenskiy 6 May 59.

6LT51

NAGINSKIY, N.A.; OBRUCHEV, V.A., akademik.

Mechanism of multiple glacierization of the west Siberian lowland. Dokl. AN
SSSR 92 no.3:645-648 S '53. (MLA 6:9)

1. Akademiya nauk SSSR (for Obruchev).
2. Tomskiy gosudarstvennyy universi-
tet im. V.V.Kuybysheva (for Naginskiy).
(Siberia, Western--Glacial epoch) (Glacial epoch--Siberia, Western)

NAGINSKIY, N.A.; AMURSKIY, G.I.

Brief review and general chart of the parallelism of Quaternary deposits in the Kara-Kum Lowlands and in southeastern Turkmenia. Izv. AN Turk. SSR no.5:12-23 '58. (MIRA 11:12)

1. Turkmenskoye geologicheskoye upravleniye i Turkmenskiy gosudarstvennyy universitet im. A.M. Ger'kege.
(Turkmenistan--Geology, Stratigraphic)

KRIVENKOV, A.M.; NAGINSKIY, N.A.

First Republic conference on the study of the Quaternary period
of the Turkmen S.S.R. Izv. Akad. Nauk Turk. SSR no. 4:86-91 '59.

(MIRA 13:8)

(Turkmenistan--Geology, Stratigraphic)

3(5)

007/11-59-7-14/17

AUTHOR: Naginskiy, N.A.

TITLE: Letter to the Editors of the "Izvestiya AN SSSR, Seriya geologicheskaya

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 7, pp 115 (USSR)

ABSTRACT: This is a criticism of an article by G.A. Arkhipov and Yu.A. Lavrushin entitled "On the Problem of the River Yenisey Flow During Maximal Glaciation and the Zyryanka Glaciation Periods", published in Nr 6 (1958) of this periodical.

SUBMITTED: December 15, 1958

Card 1/1

NAGINSKIY, N.A.; AMURSKIY, G.I.

History of the old Amu Darya. Izv. vys. ucheb. zav.;
geol. i razv. 3 no.6:32-37 Je '60. (MIRA 14:7)

1. Turkmenskiy gosudarstvennyy universitet.
(Amu Darya Valley—Geology, Stratgraphic)

NAGINSKIY, N.A.

Conference on the study of the Quaternary period in Turkmenia.
Bul. Kom. chetv. per. no.25:126-129 '60. (MIRA 14:1)
(Turkmenistan--Geology)

007110011

USSR /Chemical Technology, Chemical Products
and Their Application

Food Industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 33058

Author : Nagirina I.O.

Title : Formation of Staphylococcic Enterotoxin in Meat
Stuffing and Finished Meat Products

Orig Pub: Vopr. pitaniya, 1956, 15, No 5, 86-87

Abstract: On studying the formation of staphylococcic enterotoxin in raw meat stuffing, cooked meatballs and meat cuts (raw and cooked) it was found that in raw stuffing and meat cuts the toxin is formed only on heavy contamination, and even then only very slowly (after 18-19 hours storage at 37°). In cooked meatballs formation of the toxin occurs

Card 1/2

USSR /Chemical Technology. Chemical Products
and Their Application

I-32

Food industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 33058

at about 20° within 3 hours after inoculation, even when the initial contamination is not very heavy. Accumulation of the toxin in meatballs and cooked meat is not accompanied by changes in organoleptic properties.

L. Iz kafedry gigiyeny pitaniya (zav. - prof. A.I. Stolmakova)
L'vovskogo meditsinskogo instituta.

Card 2/2

USSR / Microbiology. Sanitary Microbiology.

F-4

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72066.

Author : Nagirna, I. O.

Inst : Not given.

Title : Formation of Staphylococcus Enterotoxin in Scalded Cream.

Orig Pub: Vopr. pitaniya, 1957, 16, No 4, 81-82.

Abstract: Periods of formation of staphylococcus enterotoxin in scalded cream were established by experiments on kittens and cats: at 30° - 12 hours, at 37° - 4 hours. At 5°, enterotoxin did not form in the course of 21 days, although the cream preserved good organoleptic properties for only 72 hours. On this basis, the author recommends the establishing of storage periods of scalded cream prod-

Card 1/2

STOLMAKOVA, A.I., NAGIRNA, I.O.

Use of pups in detecting staphylococcal enterotoxin. Lab.delo 6
[1.e.4] no.4:50-51 J1-Ag '58 (MIRA 11:9)

1. Iz kafedry gigiyeny pitaniya (zav. - prof.A.I. Stolmakova)
L'vovskogo meditsinskogo instituta.
(STAPHYLOCOCCI)

STOLMAKOVA, A.I., prof.; NAGIRNA, I.C.

Methods in the study of nutrition among the rural population. Vrach.
delo no.10:90-92 0 '60. (MIRA 13:11)

1. Kafedra gigiye y pitaniya (zav. - prof. A.I.Stolmakova)
L'vovskogo meditsinskogo instituta.
(NUTRITION)

NAGIRNA, I.O.

Characteristics of the diet of the rural population in endemic goiter
foci. Vrach.delo no.11:109-111 N '60. (MIRA 13:11)

1. Kafedra gigiyeny pitaniya (zav. - prof. A.I.Stolmakova)
L'vovskogo meditsinskogo instituta.
(L'VOV PROVINCE--GOITER)
(DIET IN DISEASE)

STOLMAKOVA, A.I.; ALYCHEVA, I.S.; NAGIRNA, I.O.

Antibiotic treatment of staphylococcal carriers. Vop, pit. 19 no.3:
66-68 My-Je '60. (MIRA 14:3)

1. Iz kafedry gigiyeny pitaniya (zav. - prof. A.I. Stolmakova) i
kafedry mikrobiologii (zav. - dotsent M.M. Muzyka) L'vovskogo
meditsinskogo instituta.
(STAPHYLOCOCCAL DISEASE) (ANTIBIOTICS)

NAGIRNA, I.O. (L'vov)

Effect of various quantities of thiamine and of iodine deficiency
on the state of the thyroid gland in albino rats. Top. pit. 24
no.1:57-60 Ja-E '65. (MIRA 18:9)

1. Otdel gigiyeny pitaniya (zav.- prof. A.I. Stolmakova)
L'vovskogo nauchno-issledovatel'skogo instituta epidemiologii,
mikrobiologii i gigiyeny.

S/043/60/000/13/15/016
C111/C222

AUTHOR: Nagirner, D.I.

TITLE: Point Source of Light ^γ in the Semiinfinite Medium

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1960, No. 13, pp. 147 - 151

TEXT: According to the method of Eddington the author determines the mean intensity of the radiation caused by a lumped source of light in a semi-infinite medium. The results of a numerical calculation are given for the case where a pure scattering takes place and the source is at the boundary of the medium. It is pointed out that the intensity in the case of the semi-infinite medium is essentially smaller than in the case of the infinite medium.
There is 1 table.

✓ B

Card 1/1

NAGIRNER, D.I.

Light polarization in stellar atmospheres. Uch.zap.LGU
no.307:79-87 '62. (MIRA 15:9)
(Stars—Atmospheres) (Polarization (Light))

ACCESSION NR: AP4018869

S/0043/64/000/001/0142/0149

AUTHOR: Nagirner, D. I.

TITLE: The multiple scattering of light in a spectral line

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1964, 142-149

TOPIC TAGS: spectroscopy, spectral line, spectral line scattering, light scattering, frequency redistribution, resolvent, Lorentz profile, Doppler profile

ABSTRACT: The multiple scattering of light in a spectral line is of interest to astronomers. It is usually assumed that such scattering takes place with a complete redistribution by frequency. This signifies that the probability of radiation in line of a quantum of a definite frequency does not depend on the frequency of the quantum when it was absorbed. In such a case the transfer process can be described by a linear, integral equation whose kernel depends on the absolute value of the difference of the arguments. For example, if the radiation is propagated in an infinite plane-parallel medium, this equation has the form:

$$B(\nu) = g(\nu) + \frac{1}{2} \int_{-\infty}^{\infty} K(|\tau - \tau'|) B(\nu') d\tau'. \quad (1)$$

Card 1/3

ACCESSION NR: AP4018869

where τ is the optical intensity at the center of the line, $B(\tau)$ is the source function, λ is the probability the quantum will survive a single scattering, $4\pi g(\tau)$ is the radiation source power, and it is assumed that the frequency distribution of the radiation of the quanta is proportional to the coefficient of absorption in the line. The kernel $K(\tau)$ has different forms in different situations. For $K(\tau)$ of the form:

$$K(\tau) = \int_0^1 A(y) e^{-y} dy, \quad (2)$$

and for $g(\tau) = (\lambda/2)K(\tau)$, (1) takes the form:

$$B(\tau) = g(\tau) + \int_0^1 \Gamma(\tau, \tau') g(\tau') d\tau', \quad (3)$$

where

$$\Gamma(\tau, \tau') = \Phi(|\tau - \tau'|) + \int_0^{\min(\tau, \tau')} \Phi(t) \Phi(t + |\tau - \tau'|) dt. \quad (4)$$

Card 2/3

ACCESSION NR: AP4018869

and the functions $\Gamma_{00}(z)$ and $\Gamma(z)$ are called resolvents. In a previous paper the author found explicit expressions for the resolvents when $K(z)$ was of form (2). In the present article, these general formulas are applied to the solution of the problem of the scattering of light in a spectral line taking the redistribution by frequency into account. It is assumed that in a continuous spectrum there is no absorption. Both one- and three-dimensional media are considered. In both types of media the two cases when the absorption coefficient has a Lorentz and a Doppler profile are studied and asymptotic expressions for the resolvents are obtained. "In conclusion, the author thanks V. V. Ivanov for his guidance and help." Orig. art. has: 52 equations.

ASSOCIATION: None

SUBMITTED: 08Jul63

SUB CODE: PH

DATE ACQ: 23Mar64

NO REF SOV: 010

ENCL:00

OTHER: 002

Card

3/3

KOLESOV, A.K.; NAGIRNER, D.I.

Point source in a semi-infinite medium bounded by a reflecting
surface. Vest. LGU 19 no.13:125-132 '64 (MIRA 17:8)

ACCESSION NR: AP4043955

S/0033/64/041/004/0669/0675

AUTHOR: Nagirner, D. I.

TITLE: Solution of integral equations of the theory of light scattering

SOURCE: Astronomicheskii zhurnal, v. 41, no. 4, 1964, 669-675

TOPIC TAGS: light scattering, stellar atmosphere, nebula, planetary atmosphere, astronomy, multiple light scattering, coherent light scattering, incoherent light scattering

ABSTRACT: The study of stellar atmospheres, nebulae and planetary atmospheres involves the problem of multiple scattering of light in a medium consisting of plane-parallel layers. In the case of isotropic scattering this problem can be reduced to the solution of a linear integral equation (with finite and semi-infinite integration intervals) with a kernel dependent on the difference modulus of the arguments. If the medium is considered infinite, this equation has the form:

(1)

$$B(\tau) = g(\tau) + \frac{\lambda}{2} \int_{-\infty}^{\infty} K(|\tau - \tau'|) B(\tau') d\tau',$$

where τ is optical depth, read from a certain level perpendicular to the layers, $B(\tau)$ is the source function, $4\pi g(\tau)$ is the intensity of the sources at the depth τ , and λ is

Card 1/3

ACCESSION NR: AP4043955

is the probability of survival of a quantum in the case of single scattering. For a semi-infinite medium the equation determining the source function has the form:

$$B(\tau) = g(\tau) + \frac{\lambda}{2} \int_0^{\infty} K(|\tau - \tau'|) B(\tau') d\tau', \quad (2)$$

where τ is read from the boundary of the medium. The form of the kernel $K(\tau)$ is determined by those processes which occur in the elementary scattering event. In most cases the kernel can be represented in the form of a superposing of exponents, that is

$$K(\tau) = \int_a^b A(y) e^{-\tau y} dy, \quad (3)$$

where $0 \leq a < b \leq \infty$. For example, in light diffusion without a change of frequency

$$K(\tau) = E_1(\tau) = \int_1^{\infty} e^{-\tau y} \frac{dy}{y}. \quad (4)$$

Kernels of the form (3) are encountered in the study of light scattering in a spectral line with frequency redistribution taken into account. In this study the author inverts the Laplace transforms for the resolvents of equations (1) and (2) for a kernel of the

Card 2/3

ACCESSION NR: AP4043955

arbitrary form (3). As an example the author considers the case of radiation diffusion without frequency change (4). Separate attention is given to the cases of a finite medium, an infinite medium and coherent isotropic scattering. The general formulas derived for the resolvents make it possible to solve fully a number of other problems in the theory of radiation propagation, especially problems of incoherent light scattering in a spectral line. Orig. art. has: 42 formulas.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova
(Leningrad State University)

SUBMITTED: 23May63

ENCL: 00

SUB CODE: AA

NO REF SOV: 013

OTHER: 004

Card 3/3

IVANOV, V.V.; NAGIRNER, D.I.

H-functions in the theory of transfer of resonance radiation.
Astrofizika 1 no.2:143-166 Je '65. (MIRA 18:10)

1. Leningradskiy gosudarstvennyy universitet.

L 5435-66 EWT(1) GW

ACC NR: AT5026207

SOURCE CODE: UR/2703/65/000/328/0066/0071

AUTHOR: Nagirner, D. I.
55

23
8+1

ORG: Astronomical Observatory, Leningrad State University (Astronomicheskaya observatoriya, Leningradskiy gosudarstvennyy universitet) 55

TITLE: On light scattering in spherical nebulae of large optical thickness

SOURCE: Leningrad. Universitet. Uchenyye zapiski, no. 328, 1965. Seriya matematicheskikh nauk, no. 39. Trudy Astronomicheskoy observatorii v. 22, 66-71

TOPIC TAGS: nebula, light diffusion, optic thickness, light scattering, light point source, astrophysics

ABSTRACT: In this paper the work of V. V. Sobolev (DAN SSSR, 155, 316, 1964), appearing as an article in the collection "Kinematika i dinamika zvezdnykh sistem i fizika mezhzvezdnoy sredy." Alma-Ata, "Nauka," 1965 is generalized. The asymptotic formulas which connect the solution of the problem of radiation diffusion in nebulae of large but finite optical thickness τ_0 with that for the problem with $\tau_0 = \infty$ are calculated. The model employed assumes pure scattering

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L 5435-66

ACC NR: AT5026207

and small absorption with no redistribution in frequency in the reemitted radiation. Two cases are considered: a spherical layer with inner radius r_1 and outer radius r_2 such that $r_2 - r_1 \ll r_1$, and a homogeneous sphere, both with point light source (stellar source) at the center. Orig. art. has: 29 formulas.

SUB CODE: AA, OP/ SUBM DATE: none/ ORIG REF: 005

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L 10280-66 EWT(1)

ACC NR: AP5025137

SOURCE CODE: UR/0388/65/001/002/0143/0156

AUTHOR: ^{44,55} Ivanov, V. V.; ^{44,55} Nagirner, D. I.

40
28
13

ORG: None

TITLE: H-functions in the theory of transfer of ^{21,44,55} resonance radiation

SOURCE: Astrofizika, v. 1, no. 2, 1965, 143-156

TOPIC TAGS: hamiltonian, resonance line, radiation intensity, resonance scattering

ABSTRACT: The authors investigated the radiative transfer in the Doppler broadened-resonance line. A semi-infinite atmosphere was considered with a negligibly small absorption in the discontinuous spectrum, using the method of approximation of complete redistribution in frequency. The intensity of the outgoing radiation was expressed by the corresponding H-function defined in the article. Tables to 5-s.f. of $H(z, \lambda)$ for a large set of values of the parameter λ were given, with special attention to values of λ close to unity. The asymptotic behavior of $H(z, \lambda)$ for $z \gg 1$ showed that for $z \gg 1$ the function $H(z, \lambda)$ did not depend on z and λ separately, but only on a certain combination of z and λ . The range of validity of the derived asymptotic expressions was

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ACC NR: AP5025137

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found to be rather wide, while their accuracy was high enough to make their use practical. The authors express their thanks to E. Dzyuba^{44,53} and S. B. Mikhailov^{44,53} for help and to Drs. D. Hammer^{44,53} and E. Avrett^{44,53} for advice. Orig. art. has: 48 formulas.

SUB CODE: 20,12/ SUBM DATE: 30May65/

NR REF SOV: 012/ OTHER: 005

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L 06209-67 EWT(1)

ACC NR: AP6029331

SOURCE CODE: UR/0388/66/002/0147/0168

AUTHOR: Ivanov, V. V.; Nagirner, D. I.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: Transfer of resonance radiation in infinite medium. II.

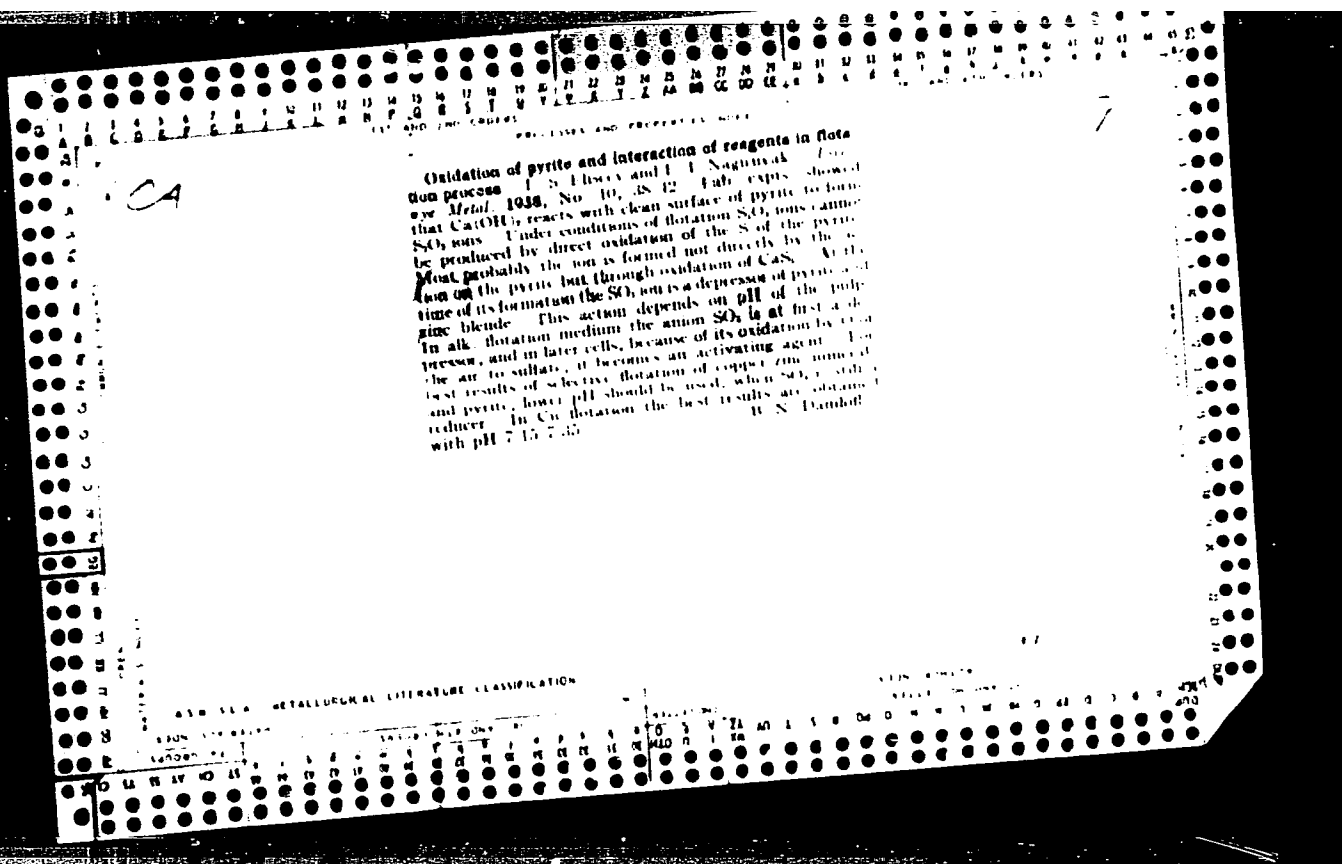
SOURCE: Astrofizika, v. 2, no. 2, 1966, 147-148

TOPIC TAGS: source function, absorption coefficient, excited atom, radiation, resonance radiation, *LIGHT SCATTERING*

ABSTRACT: The source function S_p for an infinite homogeneous medium with a point energy source is studied as a function of the optical distance from the source (τ) and the wavelength (λ) on the assumption of complete frequency redistribution. The analysis is limited to $\tau \ll 1$ and $\tau \gg 1$. Three forms of absorption coefficient (Doppler, Voigt, and Lorentz) are considered. Special attention is paid to nearly conservative scattering ($1 - \lambda \ll 1$). Physical interpretation of the results is given. The effect of frequency redistribution on spatial distribution of excited atoms is discussed. Orig. art. has: 70 formulas, 2 figures, and 2 tables.

SUB CODE: 03/ SUBM DATE: 29Dec65/ ORIG REF: 005/ OTH REF: 004/

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1ST AND 2ND COLUMNS

PROCESSES AND PROPERTIES INDEX

CA

9

Increasing the yields in the flotation of Novolevinsk ores. F. I. Nagirnyak and B. M. Lakota. *Tsvetnye Metal.* 1939, No. 3, 71; *Chem. Zvesti.* 1940, 1, 1739.

In the sep. flotation of the sandy and the muddy fractions of the pulp from Novolevinsk (Cu) ores the best yields were obtained by the use of suitable collectors. In the common flotation of both portions the largest yields were obtained by choosing the most favorable ratio of the reagents. The injurious action of the SO_4 ions in the pulp was eliminated by the addn. of $BaCl_2$, which also improved the quality of the concentrate. M. G. M.

1ST AND 2ND COLUMNS

PROCESSES AND PROPERTIES INDEX

NAGIRNYAK F. I., LAKOTA, B.M.

"On the Use of Single-Stage Machines in Concentration Plants of the "Urals"
Tsvet. Met. 14, No. 10-11, Oct.-Nov. 1939.

Report U-1506, 4 Oct. 1951.

1. NAGIRNYAK, F. I.; LAKOTA, B. M.

2. USSR (609)

TsGintsvetmet (Central State Institute of Nonferrous Metallurgy).

"Improved Results of Flotation of Novolevinskiy Ore," Tsvet. Met., 14, No 3,
Mar. 1939.

9. Report U-1506, 4 Oct 1951.

1. MAZEBITS, A. A., NAGIRNYAK, F.I.

2. USSR (600)

Engineer. "Results of Work at the Pyshma Concentration Plant of the Main Administration of Copper Industry" Tsvet. met. 14, No 3, March 1939.

9. ~~Report~~ Report U-1506, 4 Oct 1951

POPOVA, V.M.; MAGIRNYAK, P.I.;

Improvements in the production of barite concentrates. TSvet.net.
29 no.1:76 Ja '56. (MIRA 9:6)

1.Uralmekhanobr.
(Barite) (Flotation)

NAGIRNYAK, F. I.

✓ The use of wet cyclones in the Krasnouralsk enriching plant. F. I. Nagirnyak, L. D. Kislyakov, and Yu. I. Nikitin. ~~Trudy~~ *Trudy* 1956, No. 2, 9-15. -- A discussion of construction of wet cyclones and schematic arrangement originally used for the sepn. of pyritic concentrates from tails of Cu flotation contg. about 25% alumina. At present they are recommended for the sepn. of sands in conjunction with classifiers. I. Benisovitz

1. Uralmekhanobr.

MAQIRNYAK, F.I.; ROKHLIN, S.L.

Development of multistep copper and copper-zinc enrichment in the
Urals. TSvet.met. 29 no.4:17-19 Ap '56. (MLRA 9:8)

(Ore dressing)

(Ural Mountains--Zinc ores)

(Ural Mountains--Copper ores)

137-58-6-11287

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 4 (USSR)

AUTHORS: Nagirnyak, F.I., Varlamova, T.S.

TITLE: A Method of Determining the Necessary Degree of Unlocking of Minerals (Metodika opredeleniya neobkhodimoy stepeni raskrytiya mineralov)

PERIODICAL: V sb.: Usloviya raskrytiya i razdeleniya mineralov rud tsvetn. met. Sverdlovsk, 1957, pp 5-24

ABSTRACT: A method is recommended for determining the required degree of comminution of ores by plotting a nomogram based on the data of a preliminary quantitative microscopic analysis of the various size classes of the initial ore sample and the screen-analysis classes of grinding products. The plotting of the diagram is described.

A. Sh.

1. Ores--Processing 2. Ores--Analysis 3. Monographs--Applications

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137-58-6-11287

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 4 (USSR) SOV/137-58-12-23929

AUTHORS: Avilova, T. P., Sergeyeva, A. S., Nagirnyak, F. I.

TITLE: Xanthate and Frother Adsorption on the Liquid-gas Interface (Adsorbtsiya ksantogenatov i aeroflotov na razdele faz zhidkost'-gaz)

PERIODICAL: Tr. n.-i. i proyekt. in-ta "Uralsmekhanobr", 1957, Nr 1, pp 19-38

ABSTRACT: The Traube stalagmometer is used to study gas-liquid interface adsorption of frothers, xanthates (X), mixtures thereof, and mixtures of these with pine oil. It is found that X and frother adsorption by the surface of an air bubble occurs in 1 or 2 sec and that all X except ethyl show frothing properties. Butyl frother stabilizes froth even in flotation concentrations. The influence of admixtures to the X, such as alcohols, dioxanthogene, carbon disulfide, thiosulfate, and inorganic substances, is investigated. In the presence of pine oil the adsorption of all the components from the solution occurs independently when concentrations are low. In the absence of pine oil, X and frothers are adsorbed independent of each other

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137-50-6-11321

Translation from: Referativnyy zhurnal, Metallurgiya. 1958, Nr 6, p 9 (USSR)

AUTHORS: Nagirnyak, F.I., Varlamova, T.S.

TITLE: Conditions for the Efficient Employment of Depressants and Activators in Selective Flotation of Nonferrous Metal Ores
(Usloviya effektivnogo ispol'zovaniya podaviteley i aktivatorov pri selektivnoy flotatsii rud tsvetnykh metallov)

PERIODICAL: V sb.: Usloviya raskrytiya i razdeleniya mineralov rud tsvetn. met. Sverdlovsk, 1957, pp 25-67

ABSTRACT: A description is presented of industrial experience and the results of investigations which identify the conditions for efficient employment of Zn and Cu sulfates, which are widely employed in the selective flotation of Cu-Zn-, Pb-Zn-, and Cu-Pb-Zn pyrite ores. The following subjects are clarified: the mechanism of $ZnSO_4$ action, the influence of Ca hydroxide on the technological properties of Zn hydroxide, the effect of non-ore-bearing minerals on the technological properties of Zn hydroxide, the effect of atmospheric O_2 on the technological properties of Ca hydroxide, the influence of Fe and Cu sulfates on the process of Zn hydroxide formation, the influence of Zn

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